

**SCS 440/450/460/660/661
Consoles Universal
CAN AccuBoom
Installation Manual**

P/N 0160-0171-073 Rev C 01/17

E28992

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CHAPTER

1

INTRODUCTION

Congratulations on your purchase of the Raven AccuBoom system! This system is designed to provide worry free turn on and turn off of your booms with respect to the as-applied coverage map. The following instructions are designed to assist you in the proper installation of the AccuBoom system. See the Viper Installation and Operation Manual for instructions on setting up the software and using the AccuBoom system. You will also need a valid AccuBoom Control activation key for your Viper in order to activate the AccuBoom system.



Important! All boom switches must remain in the **OFF** position while AccuBoom control is in operation!

COMPONENTS NEEDED

- CAN AccuBoom Control Node – P/N 063-0172-316
- AccuBoom Control Activation Key – P/N 077-0180-010
- SCS440/450/460/660/661 Console Universal CAN AccuBoom Cable – P/N 115-1001-003
- CAN AccuBoom installation Sheet, SCS440/450/460/660/661 Universal Cable – P/N 016-0171-073



Important: If no CAN system currently exists on the machine you are installing AccuBoom on, you will need these additional components:

Kit, CANBus, Terminators & Power Adapter “T” – P/N 117-0159-923

Appropriate length CANBus Tee Cable:

6 inch CAN Tee Cable – 115-0171-364

6 Ft CAN Tee Cable – 115-0171-326

12 Ft CAN Tee Cable – 115-0171-362

18 Ft CAN Tee Cable – 115-0171-690

24 Ft CAN Tee Cable – 115-0171-363

Notes:

CHAPTER 2 INSTALLATION

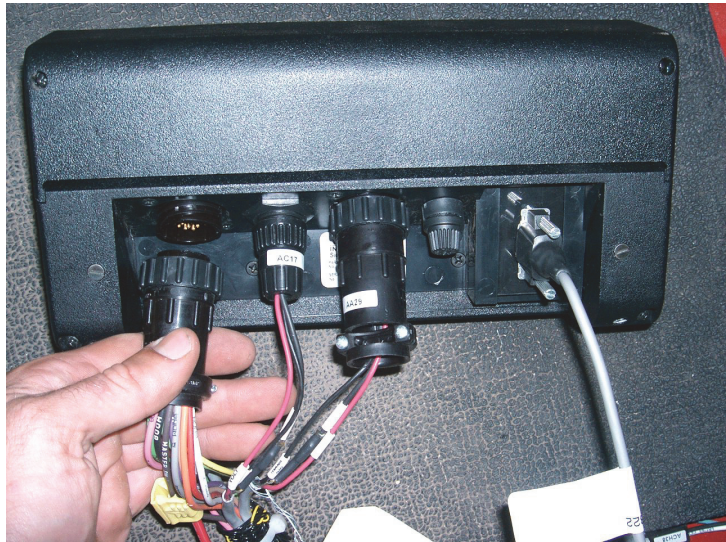
Use the following procedure to properly install the CAN AccuBoom Serial Console cable:

1. Connect the CAN AccuBoom/Serial Console Cable P/N 115-1001-003 to the Raven console.

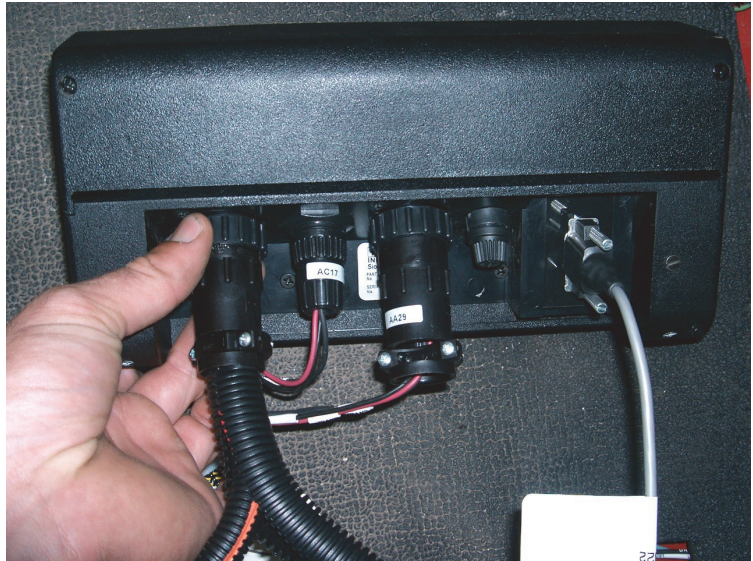


Important! The CAN AccuBoom/Serial Console Cable P/N 115-1001-003 is compatible with Raven SCS440, SCS450, SCS460, SCS660, and SCS661 consoles only.

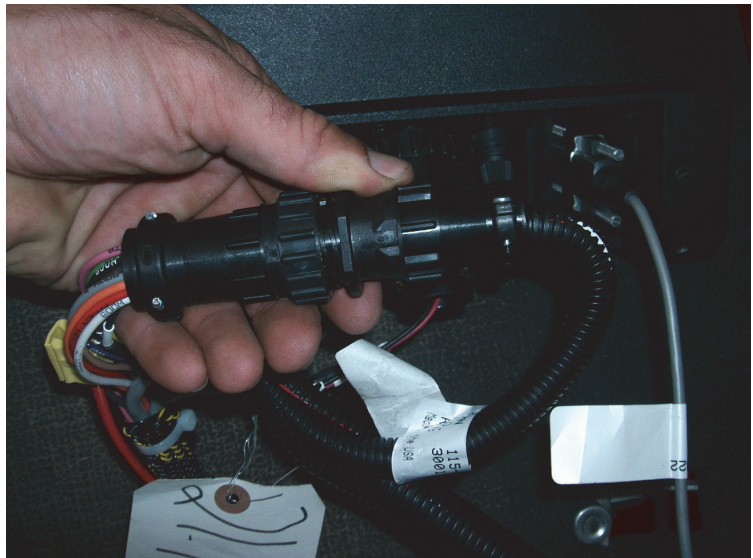
- a. Disconnect the existing console cable from the back of the console.



- b. Connect the CAN AccuBoom/Serial Console Cable P/N 115-1001-003 to the back of the Raven console.



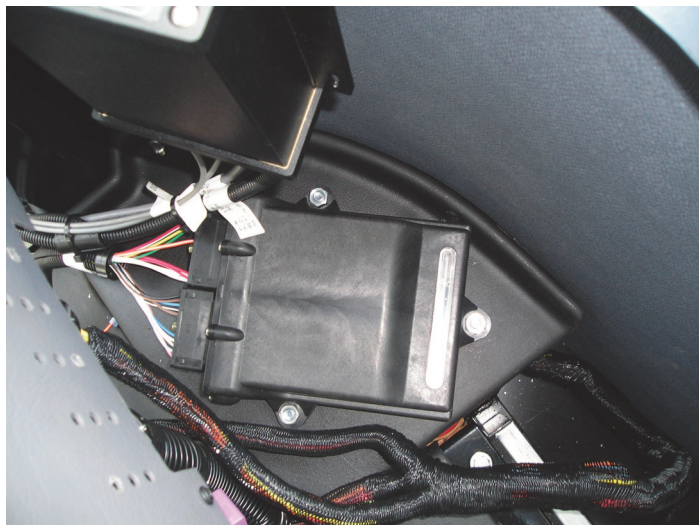
- c. Connect the console cable previously disconnected to the mating connector on the CAN AccuBoom/Serial Console Cable P/N 115-1001-003.



2. Connect the CAN AccuBoom cable to the CAN AccuBoom node.
 - a. Connect the rectangular connectors from the CAN AccuBoom/Serial Console Cable P/N 115-1001-003 to the CAN AccuBoom Node P/N 063-0172-316.



3. Mount The CAN AccuBoom Node.
 - a. Route the CAN AccuBoom/Serial Console Cable P/N 115-1001-003 from the console connection to a location suitable to mount the CAN AccuBoom node P/N 063-0172-316.
 - b. Identify a suitable location to secure the CAN AccuBoom Node P/N 063-0172-316 to the machine.
 - c. Bolt the CAN AccuBoom Node P/N 063-0172-316 securely in place.



4. Connect the Master Switch Power to AccuBoom Node (SCS460/660/661 Consoles only).
 - a. Install a male spade connector on the end of an 18 ga (minimum) wire.
 - b. Connect the male spade connector to the female spade connector coming out of the CAN AccuBoom/Serial Console Cable P/N 115-1001-003.



- c. Connect the other end of the wire to the output of the master spread/hold switch.



Note: Raven SCS440/450 consoles have the master switch in the control console. The CAN AccuBoom/Serial Console Cable P/N 115-1001-003 is pre-wired to the master switch in the control console.

5. Connect the CAN AccuBoom cable to the CANBus system.



Note: If your system does not currently have a CAN system installed, see the CAN installation instructions in Chapter 3 of this installation guide.

6. The AccuBoom installation is now complete.

CHAPTER

3

CAN INSTALLATION

If the machine you are working on does not currently have a Raven CAN system, you will need a Kit, CANbus, Terminators & Power Adapter “T” P/N 117-0159-923. This kit contains the CAN Cable Adapter Tee With Power P/N 115-0171-368 and two (2) CANBus Terminators P/N 063-0172-369. To install a Raven CAN system:

1. Connect CAN Tee to power and ground.
 - a. Locate a convenient source of power and ground near the control system.
 - b. Connect the power wire of the CAN Cable Adapter Tee With Power P/N 115-0171-368 to a source of clean 12 volt power.
 - c. Connect the ground wire from the CAN Cable Adapter Tee With Power P/N 115-0171-368 to a clean battery ground.



2. Connect the CAN bus to the Controller.
 - a. Connect CAN Terminator P/N 063-0172-369 to one connector on the Can Cable Adapter Tee With Power P/N 115-0171-368.

CAN Terminator



- b. Connect the second connector on the CAN Cable Adapter Tee With Power P/N 115-0171-368 to the CAN connector on the Envizio or Viper interface cable.



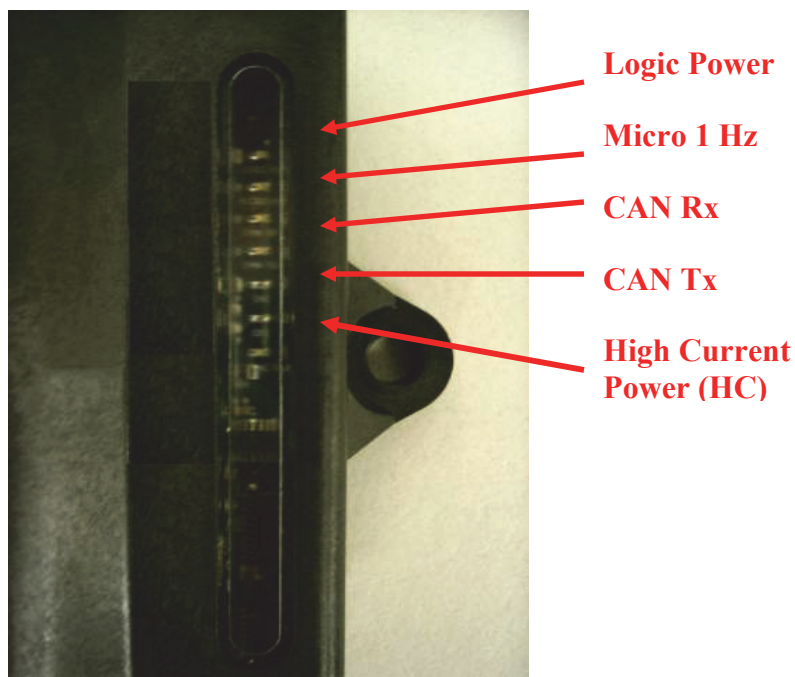
The CAN bus system is now installed and CAN nodes may be connected to it.

CHAPTER

4

SYSTEM TROUBLESHOOTING

The CAN AccuBoom Node P/N 063-0172-316 has additional features to allow the user to diagnose the AccuBoom system. The CAN AccuBoom node has a plastic window in the case that allows the user to view green diagnostic lights. The picture below shows the positioning and function of each of the LED lights.



- **Logic Power:** Lit when 12VDC logic power is available at the node.
- **Micro 1 Hz:** Flashes at 1 Hz interval when processor is active.
- **CAN Rx:** Flashes when CAN messages are being received.
- **CAN Tx:** Flashes when CAN messages are being transmitted.
- **High Current Power:** Lit when High Current Power is applied to the node.

RAVEN

Limited Warranty

What Does this Warranty Cover?

This warranty covers all defects in workmanship or materials in your Raven Applied Technology Division product under normal use, maintenance, and service when used for intended purpose.

How Long is the Coverage Period?

Raven Applied Technology products are covered by this warranty for 12 months from the date of retail sale. In no case will the Limited Warranty period exceed 24 months from the date the product was issued by Raven Industries Applied Technology Division. This warranty coverage applies only to the original owner and is non-transferable.

How Can I Get Service?

Bring the defective part and proof of purchase to your Raven dealer. If the dealer approves the warranty claim, the dealer will process the claim and send it to Raven Industries for final approval. The freight cost to Raven Industries will be the customer's responsibility. The Return Materials Authorization (RMA) number must appear on the box and all documentation (including proof of purchase) must be included inside the box to be sent to Raven Industries.

What Will Raven Industries Do?

Upon confirmation of the warranty claim, Raven Industries will (at our discretion) repair or replace the defective product and pay for the standard return freight, regardless of the inbound shipping method. Expedited freight is available at the customer's expense.

What is not Covered by this Warranty?

Raven Industries will not assume any expense or liability for repairs made outside our facilities without written consent. Raven Industries is not responsible for damage to any associated equipment or products and will not be liable for loss of profit, labor, or other damages. The obligation of this warranty is in lieu of all other warranties, expressed or implied, and no person or organization is authorized to assume any liability for Raven Industries.

Damages caused by normal wear and tear, misuse, abuse, neglect, accident, or improper installation and maintenance are not covered by this warranty.



Extended Warranty

What Does this Warranty Cover?

This warranty covers all defects in workmanship or materials in your Raven Applied Technology Division product under normal use, maintenance, and service when used for intended purpose.

Do I Need to Register My Product to Qualify for the Extended Warranty?

Yes. Products/systems must be registered within 30 days of retail sale to receive coverage under the Extended Warranty. If the component does not have a serial tag, the kit it came in must be registered instead.

Where Can I Register My Product for the Extended Warranty?

To register, go online to www.ravenhelp.com and select Product Registration.

How Long is the Extended Warranty Coverage Period?

Raven Applied Technology products that have been registered online are covered for an additional 12 months beyond the Limited Warranty for a total coverage period of 24 months from the date of retail sale. In no case will the Extended Warranty period exceed 36 months from the date the product was issued by Raven Industries Applied Technology Division. This Extended Warranty coverage applies only to the original owner and is non-transferable.

How Can I Get Service?

Bring the defective part and proof of purchase to your Raven dealer. If the dealer approves the warranty claim, the dealer will process the claim and send it to Raven Industries for final approval. The freight cost to Raven Industries will be the customer's responsibility. The Return Materials Authorization (RMA) number must appear on the box and all documentation (including proof of purchase) must be included inside the box to be sent to Raven Industries. In addition, the words "Extended Warranty" must appear on the box and all documentation if the failure is between 12 and 24 months from the retail sale.

What Will Raven Industries Do?

Upon confirmation of the product's registration for the Extended Warranty and the claim itself, Raven Industries will (at our discretion) repair or replace the defective product and pay for the standard return freight, regardless of the inbound shipping method. Expedited freight is available at the customer's expense.

What is Not Covered by the Extended Warranty?

Raven Industries will not assume any expense or liability for repairs made outside our facilities without written consent. Raven Industries is not responsible for damage to any associated equipment or products and will not be liable for loss of profit, labor, or other damages. Cables, hoses, software enhancements, and remanufactured items are not covered by this Extended Warranty. The obligation of this warranty is in lieu of all other warranties, expressed or implied, and no person or organization is authorized to assume any liability for Raven Industries.

Damages caused by normal wear and tear, misuse, abuse, neglect, accident, or improper installation and maintenance are not covered by this warranty.